Claim Amendments

1. (Currently Amended) A flow-through cell block embedding apparatus, comprising:

a cell flow pathway defined by an inflow tube adapted to be coupled to a sample port for delivering cell fragments from a cell sample to ~~a~~ the sample port, the sample port being in fluid communication with a tissue cassette having attached thereto a filter, the cell flow pathway being configured so that, upon the application of pressure from a pressure source, the cell fragments are drawn from the cell sample through the inflow tube to the sample port and deposited onto the filter; and

a reagent flow pathway defined by a plurality of reagent delivery tubes adapted to be coupled to a reagent port for delivering ~~the~~ a plurality of reagents to ~~a~~ the reagent port in communication with the sample port, the reagent flow pathway being configured so that, upon the application of pressure from a pressure source, the reagents are drawn through the reagent delivery tubes to the reagent port and to the deposited cell fragments on the filter.

2. (Currently Amended) The apparatus of claim 1, ~~wherein~~ further comprising a tissue cassette in fluid communication with the sample port and the reagent port such that the cell fragments are automatically deposited near the plane to be sectioned by a microtome.

3. (Original) The apparatus of claim 1, wherein the pressure applied to the reagent flow pathway is a negative pressure.

4. (Original) The apparatus of claim 1, wherein the pressure applied to the reagent flow pathway is a positive pressure.

5. (Original) The apparatus of claim 1, wherein the pressure applied to the cell flow pathway is a negative pressure.

6. (Original) The apparatus of claim 1, wherein the pressure applied to the cell flow pathway is a positive pressure.

7. (Original) The apparatus of claim 1, wherein the reagent flow pathway includes a reagent delivery tube for delivering a reagent selected from the group consisting of alcohol xylene, hot paraffin, distilled water, saline, acid, hematoxylin, eosin, and immunohistochemistry reagents.

8. (Original) The apparatus of claim 7, wherein the reagent flow pathway includes a heated reagent delivery tube for delivering hot paraffin to the sample port.

9. (Original) The apparatus of claim 1, wherein each reagent delivery tube further includes a pump for regulating the flow of reagent through the tube.

10. (Original) The apparatus of claim 1, wherein each reagent delivery tube further includes a solenoid tube clamp for forming an airtight pathway.

11. (Currently Amended) The apparatus of claim 1, ~~wherein the~~ further comprising a filter that is ~~removable~~ removably and replaceably positioned adjacent to ~~from~~ the tissue cassette.

12. (Original) The apparatus of claim 11, wherein the filter comprises polycarbonate.

13. (Original) The apparatus of claim 1, wherein the tissue cassette further includes a cylindrical port extending through the cassette configured for attachment to the filter.

14. (Original) The apparatus of claim 13, wherein the cylindrical port is configured for attachment to the sample port.

15. (Original) The apparatus of claim 1, further including a waste container for collecting at least one of the plurality of reagents.

16. (Original) The apparatus of claim 15, wherein the waste container includes a port for connecting to a pressure source.

17. (Original) The apparatus of claim 16, wherein the port further includes a pressure gauge.

18. (Original) The apparatus of claim 1, wherein the sample port is disposable.

19. (Original) The apparatus of claim 1, wherein the apparatus is fully automated.

20. (New) A tissue cassette assembly for cell block embedding, comprising:

a cassette body having a port that extends from a top surface to a bottom surface of the tissue cassette body, the region of the port extending from the top surface being adapted to be in fluid communication with a sample or a reagent, and the region of the port extending from the bottom surface being adapted to be in communication with a removable gasket, the removable gasket providing a fluid tight seal; and

a filter in contact with the removable gasket and adapted to capture cell fragments from a cell sample and allow preparation of the captured fragments with a plurality of reagents for a tissue sectioning device, the filter being adapted to be positioned in a plane desired for tissue sectioning.

21. (New) The tissue cassette of claim 20, wherein the tissue cassette has a length of about 40mm to about 50mm.

22. (New) The tissue cassette of claim 20, wherein the tissue cassette has a width of about 20mm to about 30mm.

23. (New) The tissue cassette of claim 20, wherein the depth of the port is about 5mm to about 15mm.

24. (New) The tissue cassette of claim 20, wherein the diameter of the port is about 0.5 inches.

25. (New) The tissue cassette of claim 20, wherein the port further comprises shelves for anchoring an embedding reagent.